Development of a hovercraft prototype with an aluminium hull base

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ABSTRACT
A study was undertaken to construct an economical and robust hovercraft by using the aluminium Al 6061-T6 (marine). In this study, the stability and ultimate strength of the aluminium Al 6061-T6 was tested to find its stands as the material for the hovercraft hull base development. Structural analysis by using NASTRAN/PATRAN software was carried out to see the suitability and the reliability of the alloy. The construction of the hull base prototype was supported by the results from this analysis and simulations of establishing aluminium Al 6061-T6 as the material use in building up the hull base. After series of experimental testing, the propulsion and lifting systems were successfully demonstrated and the prototype capable of maneuvering nicely.

KEYWORDS:
Hovercraft; hull base; aluminium; structural analysis

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